AMENDMENTS TO THE CLAIMS

Claim 1. (Previously Presented)

A solid-state electronic imaging device comprising:

a lot of photoelectric conversion elements arranged in the column direction and the row direction;

one or more vertical transfer paths for transferring signal charges respectively accumulated in said photoelectric conversion elements in the vertical direction;

one or more transfer gates for respectively shifting the signal charges accumulated in the photoelectric conversion elements to said vertical transfer paths upon receipt of transfer gate pulses;

a horizontal transfer path for horizontally transferring the signal charges transferred from the vertical transfer paths;

color filters respectively formed on the photoelectric conversion elements and arranged such that the order of color signal components respectively represented by the signal charges substantially corresponding to one row which are inputted to the horizontal transfer path in reading out all pixels is a repetition of a red signal component, a green signal component, a blue signal component, and a green signal component, and the respective timings at which the red signal component and the blue signal component are outputted in odd rows are reverse to those in even rows; and

a readout control that applies the transfer gate pulses to said transfer gates such that the order of color signal components respectively represented by the signal charges substantially

corresponding to one row which are inputted to the horizontal transfer path is a repetition of a red signal component, a green signal component, a blue signal component, and a green signal component in every other row, and the respective timings at which the red signal component and the blue signal component are outputted in odd rows are reverse to those in even rows; and

wherein a plurality of the signal charges which are adjacent to each other are mixed in the horizontal transfer path.

Claim 2. (Previously Presented)

The solid-state electronic imaging device according to claim 1, wherein

said photoelectric conversion elements are in a honeycomb arrangement where they are arranged in odd rows or even rows with respect to odd columns and arranged in even rows or odd rows with respect to even columns, and

the color filters which allow the transmission of a green light component are respectively arranged in said photoelectric conversion elements in odd rows or even rows, and the color filters which allow the transmission of a blue or red light component are alternately arranged for each column and for each row in said photoelectric conversion elements in even rows or odd rows.

Claim 3. (Previously Presented)

The solid-state electronic imaging device according to claim 1, wherein

said color filters are in a G-stripe R/B checkered arrangement where the color filters which allow the transmission of a green light component are arranged in a vertical stripe shape,

and the color filters which allow the transmission of a blue or red light component are arranged in a checkered shape.

Claim 4. (Previously Presented)

A solid-state electronic imaging device comprising:

a plurality of photoelectric conversion elements arranged in the column direction and the row direction; one or more vertical transfer paths for transferring signal charges respectively accumulated in said photoelectric conversion elements in the vertical direction; one or more transfer gates for respectively shifting the signal charges accumulated in the photoelectric conversion elements to said vertical transfer path upon receipt of transfer gate pulses;

and a horizontal transfer path for horizontally transferring the signal charge transferred from the horizontal transfer paths, where a method of controlling the operation of the solid-state electronic imaging device comprises:

forming and arranging color filters respectively on the photoelectric conversion elements such that the order of color signal components respectively represented by the signal charges substantially corresponding to one row which are inputted to the horizontal transfer path in reading out all pixels is a repetition of a red signal component, and a green signal component, and the respective timings at which the red signal component and the blue signal component are outputted in odd rows are reverse to those in even rows,

applying the transfer gate pulses to said transfer gates such that the order of color signal components respectively represented by the signal charges substantially corresponding to one

row which are inputted to the horizontal transfer path is a repetition of red signal component, a green signal component, a blue signal component, and a green signal component in every other row, and the respective timings at which the red signal component and the blue signal component are outputted in odd rows are reverse to those in even rows; and mixing a plurality of the signal charges which are adjacent to each other, in the horizontal transfer path.

Claim 5. (Currently Amended)

A method of controlling signals from a photoelectric conversion element array, comprising:

arranging a plurality of photoelectric conversion elements, each photoelectric conversion element producing a color signal, in adjacent offset rows and columns, such that each adjacent row and column is comprised of either photoelectric conversion elements producing only a green color signal or photoelectric conversion elements that produce in an alternating sequence, a red color signal and a blue color signal;

controlling a readout of the color signals from the photoelectric conversion elements using transfer gate pulses associated with transfer gates for shifting the color signals to ~~forming~~ a vertical transfer path adjacent to each column ~~by which the~~ and the transfer of the color signals ~~are transferred from the photoelectric conversion elements~~ from the vertical transfer path to a horizontal transfer path; and

mixing the green color signals, red color signals and blue color signals from adjacent rows so that the order of the color signals in the horizontal transfer path is a repetition of a red

color signal, green color signal, blue color signal and green color signal in every other row, and the respective timings at which the red signal component and blue signal component are outputted in odd rows are reverse to those in even rows;

wherein a plurality of the signal charges which are adjacent to each other are mixed in the horizontal transfer path.